

IFW



LMC:ejv 06/07/04 23-65037-01 13664-B 275323

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**In re application of:**

Larry C. Olsen et al.

**Application No.** 10/726,744

**Filed:** December 2, 2003

**Confirmation No.** 6833

**For:** THERMOELECTRIC DEVICES AND APPLICATIONS FOR THE SAME

**Examiner:** Not yet assigned

**Art Unit:** 1753

**Attorney Reference No.** 23-65037-01

**CERTIFICATE OF MAILING**

I hereby certify that this paper, and the documents referred to as being attached or enclosed herewith are being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: MAIL STOP AMENDMENT, COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450 on the date shown below.

Attorney  
for Applicant(s)

LC 1111

Date Mailed

6/7/04

**INFORMATION DISCLOSURE STATEMENT  
PURSUANT TO 37 C.F.R. § 1.97(b)(3)**

MAIL STOP AMENDMENT  
COMMISSIONER FOR PATENTS  
P.O. BOX 1450  
ALEXANDRIA, VA 22313-1450

Listed on the accompanying form PTO-1449 and enclosed herewith are several English-language documents. Applicants respectfully request that these documents be listed as references cited on the issued patent.

If the present application was filed after June 30, 2003, copies of United States patents and United States published patent applications do not have to be provided to the Patent Office. This requirement of 37 C.F.R. § 1.98(a)(2)(i) has been waived by the United States Patent and Trademark Office pursuant to the Official Gazette Notice on August 5, 2003 (1276 OG 55). Applicants will provide copies of such patents upon request.

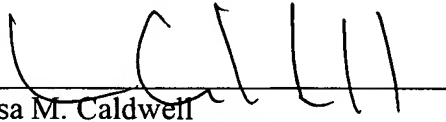
Applicants filed this Information Disclosure Statement ("IDS") before the mailing date of a first Office action on the merits. As a result, no fee should be required to file this IDS. However, if the Patent Office determines that a fee is required for Applicants to file this IDS, please charge any such fees, or credit overpayment, to Deposit Account No. 02-4550. A **duplicate** copy of this Information Disclosure Statement is enclosed.

The filing of this IDS shall not be construed to be an admission that the information cited in the statement is, or is considered to be, prior art or otherwise material to patentability as defined in 37 C.F.R. §1.56.

Respectfully submitted,

KLARQUIST SPARKMAN, LLP

By

  
Lisa M. Caldwell  
Registration No. 41,653

One World Trade Center, Suite 1600  
121 S.W. Salmon Street  
Portland, Oregon 97204  
Telephone: (503) 226-7391  
Facsimile: (503) 228-9446  
cc: Docketing



# **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

Attorney Docket Number	23-65037
Application Number	10/726,744
Filing Date	December 2, 2003
First Named Inventor	Larry C. Olsen
Art Unit	1753
Examiner Name	Not yet assigned

## **U.S. PATENT DOCUMENTS**

NOTE: If this application was filed after June 30, 2003, copies of United States patents and United States published patent applications do not have to be provided to the Patent Office. This requirement of 37 C.F.R. § 1.98(a)(2)(i) has been waived by the United States Patent and Trademark Office pursuant to the Official Gazette Notice on August 5, 2003 (1276 OG 55).

Examiner's Initials*	Cite No. (optional)	Number	Publication Date	Name of Applicant or Patentee
		6,096,964	8/2000	Ghamaty et al.
		6,096,965	8/2000	Ghamaty et al.
		6,288,321	9/2001	Fleurial et al.
		6,372,538	4/2002	Wendt et al.
		6,388,185	5/2002	Fleurial et al.
		6,413,645	7/2002	Graff et al.

## **FOREIGN PATENT DOCUMENTS**

Examiner's Initials*	Cite No. (optional)	Country	Number	Publication Date	Name of Applicant or Patentee

## **OTHER DOCUMENTS**

Examiner's Initials*	Cite No. (optional)	
		Stölzer, M. et al., "Preparation of Highly Effective p-Bi <sub>2.5</sub> Sb <sub>1.5</sub> Te <sub>3</sub> and n-Bi <sub>2</sub> Te <sub>2.7</sub> Se <sub>0.3</sub> Films," 15 <sup>th</sup> International Conference on Thermoelectrics, pp. 445-449 (1996).
		Stordeur, Matthias et al., "Low Power Thermoelectric Generator - self-sufficient energy supply for micro systems," 16 <sup>th</sup> International Conference on Thermoelectrics, pp. 575-577 (1997).
		Stark, Ingo et al., "New Micro Thermoelectric Devices Based on Bismuth Telluride-Type Thin Solid Films," 18 <sup>th</sup> International Conference on Thermoelectrics, pp. 465-472 (1999).
		Stölzer, M. et al., "Optimisation of p - (Bi <sub>0.25</sub> Sb <sub>0.75</sub> ) <sub>2</sub> Te <sub>3</sub> and n - Bi <sub>2</sub> (Te <sub>0.9</sub> Se <sub>0.1</sub> ) <sub>3</sub> Films for Thermoelectric Thin Film Components," 5 pages.

EXAMINER  
SIGNATURE:

DATE  
CONSIDERED:

\* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>		Attorney Docket Number	23-65037
		Application Number	10/726,744
		Filing Date	December 2, 2003
		First Named Inventor	Larry C. Olsen
		Art Unit	1753
		Examiner Name	Not yet assigned
		Bergstresser, T.R. et al., "Copper on Polyimide Flexible Substrate for Ultra-Thin, High Performance Applications," 4 pages.	
		Vining, Cronin B., "Semiconductors are cool," <i>Nature</i> , Vol. 413, pp. 577-578 (October 11, 2001).	
		Venkatasubramanian, Rama et al., "Thin-film thermoelectric devices with high room-temperature figures of merit," <i>Nature</i> , Vol. 413, pp. 597-602 (October 11 2001).	
		Chen, G., "Thermal conductivity and ballistic-phonon transport in the cross-plane direction of superlattices," <i>Phys. Rev. B</i> , Vol. 57, No. 23, pp. 14958-14973 (June 15, 1998).	
		Hicks, L.D. et al., "Effect of quantum-well structures on the thermoelectric figure of merit," <i>Phys. Rev. B</i> , Vol. 47, No. 19, pp. 12727-12731 (May 15, 1993).	
		Kiely, J.H. et al., "Characteristics of Bi <sub>0.5</sub> Sb <sub>1.5</sub> Te <sub>3</sub> /Be <sub>2</sub> Te <sub>2.4</sub> Se <sub>0.6</sub> thin-film thermoelectric devices for power generation," <i>Meas. Sci. Technol.</i> , Vol. 8, pp. 661-665 (June 1997).	
		Nolas, G.S. et al., Thermoelectrics, "Basic Principles and New Materials Developments," Springer, Berlin, pp. 111-146 (2001).	
		Tritt, T., "Recent Trends in Thermoelectric Materials Research III," Academic Press, London, Vol. 7, pp. 50-55 (2001).	
		Schaevitz, Samuel B. et al., "A Combustion-Based MEMS Thermoelectric Power Generator," The 11 <sup>th</sup> International Conference on Solid-State Sensors and Actuators, Munich, Germany, 4 pages (June 10-14, 2001).	
		21 <sup>st</sup> International Conference on Thermoelectrics, Jet Propulsion Laboratory, California Institute of Technology, Massachusetts Institute of Technology; "Texture formation in extruded rods of (Bi,Sb) <sub>2</sub> (Te,Se) <sub>3</sub> thermoelectric alloys," Vasilevskiy, E. et al. (August 26-29, 2002).	
		Thin-film Superlattice Thermoelectric Technology, <a href="http://www.rti.org">www.rti.org</a> , 4 pages (2002).	
		Physics of Thin Films: Sputter Deposition (Ohring: Chapter 3, sections 5-6), <a href="http://www.uccs.edu/~tchrste/courses/PHYSS549/549lectures/sputter.html">www.uccs.edu/~tchrste/courses/PHYSS549/549lectures/sputter.html</a> , 4 pages (Printed 11/21/02).	
		Physics of Thin Films: Sputter Deposition Techniques (Ohring: Chapter 3, section 7), <a href="http://www.uccs.edu/~tchrste/courses/PHYSS549/549lectures/sputtertech.html">www.uccs.edu/~tchrste/courses/PHYSS549/549lectures/sputtertech.html</a> , 5 pages (Printed 11/21/02).	
		Venkatasubramanian, R., "Thin-film Superlattice Thermoelectric Devices for Power Conversion and Cooling," <a href="http://www.its.org/its/ict2002/Abstracts/Rama_Venkatasubramanian.htm">www.its.org/its/ict2002/Abstracts/Rama_Venkatasubramanian.htm</a> (Printed 9/26/03).	

EXAMINER SIGNATURE:	DATE CONSIDERED:
* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.	

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>		Attorney Docket Number	23-65037
		Application Number	10/726,744
		Filing Date	December 2, 2003
		First Named Inventor	Larry C. Olsen
		Art Unit	1753
		Examiner Name	Not yet assigned
		D.T.S. GmbH: Thin Film Thermoelectric Generators, D.T.S., <a href="http://www.dts-generator.com/index.htm">www.dts-generator.com/index.htm</a> (Printed 5/4/04).	
		D.T.S. GmbH: Thin Film Thermoelectric Generators, Low Power Thermoelectric Generators; <a href="http://www.dts-generator.com/gen.tx.e.htm">www.dts-generator.com/gen.tx.e.htm</a> (Printed 5/4/04).	
		D.T.S. GmbH: Thin Film Thermoelectric Generators, Infrared-Sensors, <a href="http://www.dts-generator.com/sen.tx.e.htm">www.dts-generator.com/sen.tx.e.htm</a> (Printed 5/4/04).	
		D.T.S. GmbH: Thin Film Thermoelectric Generators, Research and development, <a href="http://www.dts-generator.com/dev.tx.e.htm">www.dts-generator.com/dev.tx.e.htm</a> (Printed 5/4/04).	

EXAMINER SIGNATURE:	DATE CONSIDERED:
<p>* Examiner: Initial if reference considered, whether or not in conformance with MPEP 609. Draw line through cite if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>	